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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,321	07/31/2000	THOMAS C. HILL	PF01869NA	4702

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EXAMINER
LEI, TSULEUN R

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/629,321	HILL ET AL.	
	Examiner	Art Unit	
	T. Richard Lei	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Tiedemann, Jr. et al. (U.S. Patent 6,317,587).

Regarding Claim 1, Tiedemann teaches an apparatus comprising: at least one sensor communicating sensor added information to a communication device within a network to

control a power level of the communication device or another device within the wireless network (Col.3, Lines 11-16), or to adjust a system capacity of the network (Col.2, Lines 22-34), wherein the at least one sensor is physically separate from the communication device (Col.4, Lines 1-6, speedometer or tachometer).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2-6 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann as applied to claim 1 above, and further in view of Merriam (U.S. Patent 6,408,187).

Regarding Claim 2, Tiedemann teaches the apparatus as claimed in claim 1. Tiedemann fails to teach about a smart sensor. Merriam, however, teaches the at least one sensor includes a smart sensor capable of taking multiple types of measurements at programmable intervals and transmitting the measurements to the communication device at the programmable intervals (Merriam, Col.2, Lines 23-32, and Fig.1). Therefore, it would have been obvious for a person

of ordinary skill in the art at the time the invention was made to combine the teaching of Merriam to the teaching of Tiedemann to better control the transmission power.

Regarding Claim 3, Tiedemann as modified by Merriam teaches the apparatus as claimed in claim 1, wherein the communication device transmits the sensor added information to a central controller (Tiedemann, Col.4, Lines 34-45).

Regarding Claim 4, Tiedemann as modified by Merriam teaches the apparatus as claimed in claim 1, wherein the communication device uses a service discovery protocol to look for a fixed position sensor for additional sensor information to adjust the power level of the communication device (Tiedemann, Col.5, Lines 52-56).

Regarding Claim 5, Tiedemann as modified by Merriam teaches the apparatus as claimed in claim 1, wherein the at least one sensor includes a motion sensor, the motion sensor being used to place the communication device in a stand-by power mode when the communication device is moving or to place the communication device in an active mode when the communication device is still (Merriam, Fig.2).

Regarding Claim 6, Tiedemann as modified by Merriam teaches the apparatus as claimed in claim 1, wherein the at least one sensor determines a position of the communication device and if the position of the wireless communication device is an active position, the communication device is placed in an active power mode and if the position of the

communication device is an inactive position, the communication device is placed in a stand-by power mode (Tiedemann, Col.4, Lines 1-16; Merriam, Fig.2).

Regarding Claim 13, Tiedemann as modified by Merriam teaches a method of improving battery life of a wireless communication device, comprising: sensing environmental conditions within a predetermined distance of the wireless communication device with a plurality of coupled sensors; determining a usage pattern match based on the sensed environmental conditions; and adjusting a power level of the wireless communication device in accordance with the usage pattern match (Merriam, Col. 2, Lines 1-32).

Regarding Claim 14, Tiedemann as modified by Merriam teaches the method as claimed in claim 13, wherein the plurality of sensors are selected from the group consisting of a motion sensor, a light sensor, a crowd sensor, a range sensor, a moisture sensor, an inertial sensor, an accelerometer sensor and a sound sensor (Merriam, Col.2, Line 12).

Regarding Claim 15, Tiedemann as modified by Merriam teaches the method as claimed in claim 13, wherein the wireless communication device switches from a stand-by power mode to an active mode when the sensed environmental conditions satisfy a predetermined condition and automatically transmits a predetermined message to a predetermined device after the predetermined condition is satisfied (Merriam Figs.1 & 2).

Regarding Claim 16, Tiedemann as modified by Merriam teaches an apparatus in a network comprised of a plurality of communication devices, comprising; a communication device having at least one sensor to process and manage sensor added information, the communication device capable of wirelessly communicating the sensor added information to the network (Merriam, Figs.1 & 2).

5. Claims 7-12 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann and Merriam as applied to the claims above, and further in view of Hsu (U.S. Patent 6,374,079).

Regarding Claim 7, Tiedemann as modified by Merriam teaches a wireless network with sensors, but they fail to teach the master-slave relationship of the communications units. Hsu, however, teaches that the communication network comprise: at least one master device, each of the at least one master devices being capable of initiating an action or requesting a service on the wireless network; and a plurality of slave devices wirelessly connected to each other and to a corresponding master device (Hsu, Col.5, Lines 3-4 and Lines 20-23). Therefore, it would have been obvious for a person of ordinary skill in the art at the time the invention was made to combine the teaching of Hsu to the teaching of Tiedemann and Merriam to control the transmission power of communications devices having master-slave relationships. Tiedemann and Merriam as modified by Hsu teach that at least one of the plurality of slave devices or the master device including at least one sensor, wherein processed sensor information from the at

least one sensor is shared by each of the plurality of slave devices and the corresponding master device (Hsu, Col.4, Lines 51-52).

Regarding Claim 8, Tiedemann and Merriam as modified by Hsu teach the wireless network as claimed in claim 7, wherein respective power levels of at least one of the plurality of slave devices or the corresponding master device are adjusted in accordance with the processed sensor information (Tiedemann, Col.3, Lines 11-16).

Regarding Claim 9, Tiedemann and Merriam as modified by Hsu teach the wireless network as claimed in claim 7, wherein at least one of the plurality of slave devices uses a service discovery protocol to look for a fixed position sensor for additional sensor information, the additional sensor information being used to select an alternate master device (Hsu, Col.5, Line 3-4, temporarily assigning).

Regarding Claim 10, Tiedemann and Merriam as modified by Hsu teach the wireless network as claimed in claim 7, wherein at least one of the plurality of slave devices uses the shared processed sensor information to select an alternate master device (Hsu, Col.5, Line 3-4, temporarily assigning).

Regarding Claim 11, Tiedemann and Merriam as modified by Hsu teach the wireless network as claimed in claim 7, further comprising a central controller connected to the at least one master device, wherein the central controller utilizes the processed sensor information to

determine capacity allocation and device allocation of the plurality of slave devices and the corresponding master device to improve a capacity of the wireless network (Tiedemann, Col.2, Lines 22-34).

Regarding Claim 12, Tiedemann and Merriam as modified by Hsu teach the wireless network as claimed in claim 11, wherein the central controller utilizes the processed sensor information to adjust the device allocation of the plurality of slave devices and the corresponding master device to improve the capacity of the wireless network (Tiedemann, Col.2, Lines 22-34).

Regarding Claim 17, see Claim 11 above.

Regarding Claim 18, see Claim 4 above.

Regarding Claim 19, see Claim 7 above.

Regarding Claim 20, see Claim 8 above.

Regarding Claim 21, Tiedemann and Merriam as modified by Hsu teach the apparatus as claimed in claim 16, wherein the at least one sensor is a moisture sensor and the sensor transmits a control signal to the network when a predetermined level of moisture is detected by the sensor (Hsu, Col.10, Line 61, precipitation sensor).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hansson et al. (U.S. Patent 6,339,713) teaches a method of decreasing battery consumption of a mobile terminal.

Patterson et al. (U.S. Patent 6,195,572) teaches an environmental sensor for a wireless communications unit.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. Richard Lei whose telephone number is 703-305-4828. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dan Hunter can be reached on 703-308-6732. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5403 for regular communications and 703-308-5403 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

TRL

TRL
January 9, 2003

11/12/03